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REMARKS/ARGUMENTS

Claims 1-10 are pending in this application.

Claims 1-10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Meadors et al. (U.S. 6,249,205) in view of Yamasawa et al. (U.S. 6,140,902). Applicant respectfully traverses this rejection.

Claim 1 recites:

> "A multilayer inductor comprising:
> a plurality of magnetic layers stacked on each other;
> through-holes formed in the stacked magnetic layers; and
> a plurality of coil conductor patterns disposed between the plurality of magnetic layers and spirally connected to each other via the through-holes;
> **wherein the area of a projected plane of a circuit of each coil conductor pattern on a main surface of respective ones of the plurality of magnetic layers is in a range from about 35% to about 75% of the area of the main surface of the respective ones of the plurality of magnetic layers.**" (Emphasis added)

The Examiner acknowledged that Meadors et al. fails to teach or suggest each coil conductor pattern on the main surface of the plurality of magnetic layers being in the range of about 35% to about 75% of the area of the main surface of the respective ones of the plurality of magnetic layers. However, the Examiner alleged that Yamasawa et al. discloses a multi-layer device including a plurality of coil conductor patterns 6 formed on a plurality of layers 3, wherein the coil conductor pattern on the main surface of the plurality of layers is in a range of about 35% to about 75% of the area of the main surface of the respective ones of the plurality of layers. Thus, the Examiner concluded that it would have been obvious to "use the coil conductor pattern design of Yamasawa et al. in Meadors et al. for the purpose of improving usage of the area of the conductive material and minimizing leakage inductance." Applicant respectfully disagrees.

As argued in the Request for Reconsideration filed on February 25, 2004, Yamasawa et al. discloses a relationship of $\underline{0.2 < a/(a+b)}$, where a is the width of a coil conductor 6, and b is the distance between mutually adjacent coil conductors. It

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appears that the Examiner is interpreting this relationship to be the equivalent of a coil conductor pattern on a main surface of a layer being in the range of about 35% to about 75% of the area of the main surface of the layer.

However, since the Examiner has again completely failed to refer to any specific portion(s) of the specification, structural element(s) or figure(s) of Yamasawa et al. which allegedly teach or suggest the feature of "wherein the area of a projected plane of a circuit of each coil conductor pattern on a main surface of respective ones of the plurality of magnetic layers is in a range from about 35% to about 75% of the area of the main surface of the respective ones of the plurality of magnetic layers" as recited in Applicant's claimed invention, it is still unclear what portion(s) of the specification, structural element(s) or figure(s) of Yamasawa et al. the Examiner is relying upon to allegedly teach or suggest this feature.

In any event, the Examiner's allegation that Yamasawa et al. teaches or suggests the feature of "wherein the area of a projected plane of a circuit of each coil conductor pattern on a main surface of respective ones of the plurality of magnetic layers is in a range from about 35% to about 75% of the area of the main surface of the respective ones of the plurality of magnetic layers" recited in Applicant's claimed invention is clearly incorrect.

As argued in the Request for Reconsideration filed on February 25, 2004 and as clearly seen in Fig. 2 of Yamasawa et al., the relationship $0.2 \leq a/(a+b)$ refers to only the portion of layer 5 which extends inwardly from the outermost coil conductor 6, and does **not** include the portion of layer 5 which extends outwardly from the outermost coil conductor 6. Since the portion of layer 5 of Yamasawa et al. which extends outwardly from the outermost coil 6 is not included in the relationship $0.2 \leq a/(a+b)$, the area of the coil conductor pattern is certainly substantially less than 20% (0.2) of the area of the main surface of the layer 5.

As argued in the Request for Reconsideration filed on February 25, 2004, even assuming *arguendo* that the relationship $0.2 \leq a/(a+b)$ in Yamasawa et al. did refer to

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the area of the coil conductor 6 with respect to the entire main surface of layer 5, Yamasawa et al. would still fail to teach or suggest the feature of "wherein the area of a projected plane of a circuit of each coil conductor pattern on a main surface of respective ones of the plurality of magnetic layers is in a range from about 35% to about 75% of the area of the main surface of the respective ones of the plurality of magnetic layers" recited in Applicant's claim 1.

The present application clearly and specifically discloses that when the area of the coil conductor patterns is less than about 35% of the area of the main surface of the layer, the DC resistance of the coils is significantly increased, and that when the area of the coil conductor pattern is more than about 75% of the area of the main surface of the layer, the magnetic flux does not pass through the coil such that the inductance is significantly reduced (see, for example, the first full paragraph on page 6 and Table 1 on page 12 of the originally filed specification).

Since the relationship $0.2 \le a/(a+b)$ contains **many** values that are outside of the claimed range of about 35% to about 75% which produce undesirable results, Applicants respectfully submit that, even assuming *arguendo* that the relationship $0.2 \le a/(a+b)$ of Yamasawa et al. refers to the area of the coil conductor 6 with respect to the entire main surface of layer 5, this relationship clearly would not render Applicant's claimed invention obvious. In fact, Yamasawa et al. fails to disclose **any** specific values for the relationship $a/(a+b)$, and certainly fails to teach or suggest **any** values which are within the range of about 35% to about 75%.

Furthermore, as argued in the Request for Reconsideration filed on February 25, 2004, the Examiner has again alleged that the motivation to use the coil conductor pattern design of Yamasawa et al. in Meadors et al. would have been "for the purpose of improving usage of the area of the conductive material and minimizing leakage inductance." However, Yamasawa et al. fails to teach or suggest anything at all regarding improved usage of a conductive material or that the structure of Yamasawa et al. minimizes leakage inductance. Thus, one of ordinary skill in the art could clearly

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NOT have been motivated to use the coil conductor pattern design of Yamasawa et al. in Meadors et al. "for the purpose of improving usage of the area of the conductive material and minimizing leakage inductance" as alleged by the Examiner.

Instead of basing the conclusion of obviousness on actual teachings or suggestions of the prior art and the knowledge of one of ordinary skill in the art at the time the invention was made, the Examiner has improperly used Applicant's own invention as a guide. It is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. In re Fritch, 972 F.2d 1260, 23 USPQ 2d 1780, 1784 (Fed. Cir. 1992).

The PTO has the burden under 35 U.S.C. §103 to establish a prima facie case of obviousness. See In re Piasecki, 745 F .2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984). The PTO can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. See In re Fine, 837 F .2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1984). This it has not done. The Examiner failed to cite prior art that remedies the deficiencies of Meadors et al. and Yamasawa et al. or that suggests the obviousness of modifying Meadors et al. and Yamasawa et al. to achieve Applicant's claimed invention.

Prior art rejections must be based on evidence. Graham v. John Deere Co., 383 U.S. 117 (1966). Pursuant to MPEP 706.02(a), the Examiner is hereby requested to cite a reference in support of his position that it was well known at the time of Applicant's invention to provide coil conductor which are arranged such that "the area of a projected plane of a circuit of each coil conductor pattern on a main surface of respective ones of the plurality of magnetic layers is in a range from about 35% to about 75% of the area of the main surface of the respective ones of the plurality of magnetic

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layers" as recited in the present claimed invention. If the rejection is based on facts within the personal knowledge of the Examiner, the data should be supported as specifically as possible and the rejection must be supported by an affidavit from the Examiner, which would be subject to contradiction or explanation by affidavit of Applicant or other persons. See 37 C.F.R. §1.104(d)(2).

In the Response to Arguments on page 3 and 4 of the outstanding Office Action, the Examiner alleged that Applicant presented only the following two arguments in the Request for Reconsideration filed on February 25, 2004;

1.   The relationship taught by Yamasawa et al. contains many values outside the claimed range of about 35% to about 75%; and

2.   There is no motivation to combine Meadors et al. with Yamasawa et al.

First, the Examiner's allegation that Applicant presented only two arguments in the Request for Reconsideration is clearly incorrect. The Examiner's attention is invited to the arguments above which include many more arguments than the two identified by the Examiner.

In addition to arguments (1) and (2) above, Applicant argued that the relationship $0.2 \leq a/(a+b)$ refers to only the portion of layer 5 which extends inwardly from the outermost coil conductor 6, and does **not** include the portion of layer 5 which extends outwardly from the outermost coil conductor 6. Since the portion of layer 5 of Yamasawa et al. which extends outwardly from the outermost coil 6 is clearly **not** included in the relationship $0.2 \leq a/(a+b)$, the area of the coil conductor pattern is certainly substantially less than 20% (0.2) of the area of the main surface of the layer 5.

The Examiner failed to specifically address this argument in the Office Action of June 1, 2004. The Examiner is reminded that where Applicant traverses any rejection, the Examiner should, if the rejection is repeated, take note of the applicant's argument and answer the substance of it. MPEP § 707.07(f), "Answer All Material Traversed." Accordingly, Applicant respectfully requests that the Examiner specifically respond to

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each and every argument presented in this response.

With respect to argument (1) above, the Examiner alleged that "as acknowledged by applicant, Yamasawa et al. discloses the claimed relationship [applicant's arguments, paragraph 3, page 7]. Applicant has not disclosed, or claimed, any specific parameters as to the specific range of values." This is clearly incorrect.

Paragraph 3 on page 7 of the Request for Reconsideration filed on February 25, 2004 states "[p]rior art rejections must be based on evidence. Graham v. John Deere Co., 383 U.S. 117 (1966). Pursuant to MPEP 706.02(a), the Examiner is hereby requested to cite a reference in support of his position that it was well known at the time of Applicant's invention to provide coil conductor which are arranged such that "the area of a projected plane of a circuit of each coil conductor pattern on a main surface of respective ones of the plurality of magnetic layers is in a range from about 35% to about 75% of the area of the main surface of the respective ones of the plurality of magnetic layers" as recited in the present claimed invention. If the rejection is based on facts within the personal knowledge of the Examiner, the data should be supported as specifically as possible and the rejection must be supported by an affidavit from the Examiner, which would be subject to contradiction or explanation by affidavit of Applicant or other persons. See 37 C.F.R. §1.104(d)(2)."

Neither this portion or any other portion of the Request for Reconsideration filed on February 25, 2004 acknowledged that Yamasawa et al. teaches or suggests the relationship of "the area of a projected plane of a circuit of each coil conductor pattern on a main surface of respective ones of the plurality of magnetic layers is in a range from about 35% to about 75% of the area of the main surface of the respective ones of the plurality of magnetic layers" as recited in Applicant's claim 1. In fact, pages 5 and 6 of the Request for Reconsideration filed on February 25, 2004, clearly and specifically set forth arguments that Yamasawa et al. fails to teach or suggest the relationship recited in Applicant's claim 1.

With respect to argument (2) above, in the Response to Argument section on

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page 4 of the outstanding Office Action, the Examiner alleged that the motivation to combine Yamasawa et al. with Meadors et al. would have been that "Yamasawa et al. teaches that the conductor size is used to optimize the inductor Q value." Applicant is completely bewildered how such an alleged teaching in Yamasawa et al. would have motivated one of ordinary skill in the art to use the coil conductor pattern design of Yamasawa et al. in Meadors et al.

The mere disclosure that the conductor size is used to optimize the inductor Q value teaches absolutely nothing about a desired area of a coil conductor pattern, and certainly would not have motivated one of ordinary skill in the art to modify the coil conductor of Meador et al. such that "the area of a projected plane of a circuit of each coil conductor pattern on a main surface of respective ones of the plurality of magnetic layers is in a range from about 35% to about 75% of the area of the main surface of the respective ones of the plurality of magnetic layers" as recited in Applicant's claim 1.

Accordingly, Applicant respectfully submits that Meadors et al. and Yamasawa et al., applied alone or in combination, fail to teach or suggest the unique combination and arrangement of elements recited in claim 1 of the present application.

In view of the foregoing remarks, Applicant respectfully submits that claim 1 is allowable. Claims 2-10 depend upon claim 1, and are therefore allowable for at least the reasons that claim 1 is allowable.

In view of the foregoing amendments and remarks, Applicant respectfully submits that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

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The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

Date: September 1, 2004
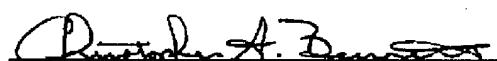
Attorneys for Applicant

Joseph R. Keating
Registration No. 37,368

Christopher A. Bennett
Registration No. 46,710

KEATING & BENNETT LLP
10400 Eaton Place, Suite 312
Fairfax, VA 22030
Telephone: (703) 385-5200
Facsimile: (703) 385-5080